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SYLVATIC PLAGUE

By

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Provincial Department of Health

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THE PURPOSE of this pamphlet is to bring to the public all the available information regarding the presence of sylvatic plague in Alberta, and also to point out the steps that are being taken by the Alberta Department of Public Health to locate and control areas of plague infection.

HISTORY OF THE PLAGUE IN NORTH AMERICA

"Sylvatic" is the term applied to the type of "bubonic" plague that occurs in rural areas. This differentiation in terminology is necessary because most people have come to associate "bubonic" plague with rats and rat fleas, and are under the impression that "bubonic" plague occurs only in India and other Asiatic countries.

It is true that "bubonic" plague, the so-called black death, originated in Asia where it has caused and still causes, thousands of deaths a year.

In Asia the disease is transmitted by rats and rat fleas.

In 1900 an outbreak occurred in California. This outbreak was due to an infection set up in local rats by diseased rats that escaped from a ship lately arrived from an Asiatic port. This outbreak caused the death of many humans before it was finally brought under control.

During this outbreak the disease was transmitted from the rats to California ground-squirrels—close relatives of rats, and investigation now shows that the ground-squirrel fleas can and do transmit the disease from one animal to another.

Since 1900 plague-infected ground-squirrels have been located in small areas in California, Washington, Idaho, Oregon and Montana in the United States, and Alberta in Canada.

SYLVATIC PLAGUE IN ALBERTA

The first indication that "sylvatic" plague might be present in Alberta occurred in August, 1937, when a mink rancher in the Hanna district died from some disease highly suggestive of the plague. This rancher was feeding his mink on locally caught ground-squirrels (gophers) when the mink began to sicken and die. Approximately 22 mink died. In order to make some saving he pelted these animals. During one of these operations he cut his finger with the pelting knife. The next day he complained of feeling ill and was taken to the hospital. Five days later he died.

The Alberta Department of Public Health decided that an investigation into the relationship of the ground-squirrels to this death should be undertaken, so in the Spring of 1938 a specially trained crew of two men, equipped with a travelling laboratory was sent into the area to collect and examine specimens of ground-squirrels. No positive results were obtained although about 150 gophers and 275 fleas were collected and examined.

In 1939 the survey crew again visited this area and collected about 269 gophers, 191 fleas and 13 specimens. Positive plague results were obtained from material collected north and east of Stanmore.

CONTROL WORK IN PLAGUE AREA

The Department of Public Health on receiving notification that the plague was present in Central Alberta immediately made plans for the delimiting of the plague area, and the control of the gophers within that area. These plans consisted of the securing of a second travelling laboratory and crew, and an intensive poisoning campaign within the suspected plague area.

Both of these projects were put into operation in May, 1940.

APPEARANCE OF THE PLAGUE IN GOPHERS

The only way to determine the presence of plague in gophers is by a detailed laboratory examination, but any gophers found dead or any sudden decrease in gopher population is highly suggestive of the disease, and people living in any area where gophers are found dead or where there has been a sudden decrease in gopher population should refrain from handling or coming into contact with the gophers. They should also notify the Department of Public Health, Edmonton.

METHODS OF CONTROL OF PLAGUE-INFECTED GOPHERS

The only way to control this disease in any area is by the complete destruction of all rodents and their fleas in the area, and this is the plan that the Department has adopted in its plague control campaign. The

farmers and others in, or adjoining, any known or suspected plague area can render valuable service by carrying on, on their own property a systematic gopher-control campaign. This campaign will not only protect their crops but may protect their health.

The method of control may be either shooting or poisoning gophers, or by the gassing of gopher burrows, utilizing for this purpose a gas which destroys both the gophers and the fleas infesting them. As such a gas is dangerous to those handling it, it should only be used under the supervision of persons experienced in this work. The Field Crops Branch of the Provincial Department of Agriculture has recommended a cheap and effective gopher bait, the recipe for which appears below, but any standard gopher-poison may be used.

SUMMARY

"Sylvatic" plague has been demonstrated to be present in Central Alberta, positive results being obtained in 1939 and 1940.

"Sylvatic" plague mainly affects rodents but can readily be transmitted to humans to whom it is usually fatal.

So far as is known there is very little chance of domestic animals contracting this disease.

There is a strong possibility that one death has occurred in Alberta from this disease.

The only way to positively identify the disease is by a detailed laboratory examination, but gophers found dead are highly suspicious. Such gophers should not be handled.

Farmers and others should endeavour to control gophers on their own lands as this control will not only protect their crops but may also protect their health.

RECIPE FOR POISON BAIT FOR GOPHERS

Sodium Arsenite	¾ Gal.
Oats	1 Bushel.
Water	1 to 1½ gals.

It is suggested that the Sodium Arsenite be diluted in water. Pour the solution over the oats, and mix in a mechanical mixer. Mix thoroughly and allow to soak for 12 to 24 hours before using.

The grain may be used in a damp or dry condition. If it is desired to store the poisoned grain for some period of time it should be dried by spreading over a floor before being piled.